

IN THE CLAIMS:

1. An electric cooker, comprising:

a base;

a housing supported on said base and having an opening;

5 a power head configured to be removably attached to said housing at said opening and including a heating unit for generating and directing heat into said housing;

at least one first piece provided on said power head for securing said power head onto said housing;

10 at least one second piece provided on said housing and configured to matingly engage said first piece for removably attaching said power head onto said housing; and

locking means provided on said power head proximate said first piece for preventing said first and second pieces from disengaging from a temperature increase inside said housing.

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2. The cooker as defined in claim 1, wherein said power head includes a manifold which rests on said opening of said housing and a wall portion extending from said manifold into said opening of said housing, and

20 wherein said at least one first piece is provided on said wall portion and said at least one second piece is provided on said housing proximate said opening.

3. The cooker as defined in claim 2, wherein said at least one first piece is a plurality of lands protruding from said wall portion of said power head, and said at least one second piece is a plurality of corresponding tabs projecting from said  
25 housing proximate said opening and configured to engage said lands.

4. The cooker as defined in claim 3, wherein said locking means is attached to said manifold proximate at least one of said lands, and spaced from said wall portion.

5. The cooker as defined in claim 4, wherein said locking means includes a plurality of brackets which abuts against said housing to prevent said housing from expanding during cooking operation.

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6. The cooker as defined in claim 2, wherein said locking means includes a plurality of brackets which abuts against said housing to prevent said housing from expanding during cooking operation.

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7. The cooker as defined in claim 6, wherein each of said brackets include a first portion configured to be attached to said manifold and a second portion extending at an angle from said first part to abut said housing.

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8. The cooker as defined in claim 7, wherein said brackets include a third portion extending at an angle from said second portion for guiding said housing into coming in contact with said second portion.

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9. The cooker as defined in claim 8, wherein said brackets are formed from a strip of substantially rigid material.

10. The cooker as defined in claim 9, wherein said brackets are formed from metal.

11. The cooker as defined in claim 7, wherein said brackets are attached to said power head by rivets, screws, welding or soldering.

12. An apparatus for preventing a power head of an electric cooker from being detached from a housing of the cooker during a cooking operation, the power head having a heating unit which extends from a bottom of the power head and into the housing through an opening, and the heating unit having a plurality of first pieces for cooperatively engaging corresponding second pieces formed on the housing

proximate the opening to secure the power head to the housing, said apparatus comprising:

at least one bracket configured to be attached to the bottom of the power head proximate at least one of the first pieces formed on the heating unit;

5 wherein said at least one bracket is located such that a portion of the housing defining the opening is received between said at least one bracket and the heating unit of the power head, so that said bracket prevents the housing from expanding during a cooking operation and causing the first pieces and the corresponding second pieces to disengage.

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13. The apparatus as defined in claim 12, wherein said bracket includes a first portion configured to be attached to said power head; and

a second portion extending at an angle from said first portion and spaced from the heating unit;

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wherein a gap is provided between the second portion and the heating unit for receiving the portion of the housing defining the opening.

14. The apparatus as defined in claim 13, wherein said at least one bracket include a third portion extending at an angle from said second portion for  
20 guiding the portion of the housing defining the opening into said gap formed by said second portion and the heating unit.

15. The apparatus as defined in claim 13, wherein said at least one bracket is attached to the power head by rivets, screws, welding or soldering.

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16. The apparatus as defined in claim 13, wherein said at least one bracket is formed from a strip of substantially rigid material.

17. The apparatus as defined in claim 16, wherein said at least one  
30 bracket is formed from metal.

18. The apparatus as defined in claim 13, wherein a plurality of brackets are attached to the bottom of the power head.

19. A method for preventing a power head of an electric cooker from  
5 being detached from a housing of the cooker during a cooking operation, the power head having a heating unit which extends from a bottom of the power head and into the housing through an opening, and the heating unit having a plurality of first securing pieces for cooperatively engaging corresponding second securing pieces formed proximate the opening of the housing to secure the power head to the housing,  
10 said method comprising:

attaching at least one bracket to the bottom of the power head proximate at least one of the first securing pieces formed on the heating unit;

wherein said bracket is located such that a portion of the housing defining the opening is received between said at least one bracket and the heating unit  
15 of the power head, so that said bracket prevents the housing from expanding when heated and causing the first and second securing pieces to disengage.

20. The method as defined in claim 19, wherein said at least one bracket includes a first portion configured to be attached to the bottom of the power  
20 head; and a second portion extending at an angle from said first portion and spaced from the heating unit; wherein a gap is provided between the second portion and the heating unit for receiving the portion of the housing defining the opening.

21. The method as defined in claim 20 further including forming a  
25 third part which extends at an angle from said second portion for guiding the portion of the housing defining the opening into said gap formed by said second portion and the heating unit.

22. A method for releasably securing a power head to a cooking  
30 housing of an electric cooker, the power head having a wall portion which extends

from a bottom of the power head into the housing through an opening, said method comprising:

providing at least one first securing piece on the wall portion of power head for securing said power head to the housing;

5 providing at least one corresponding second securing piece on the oven housing for cooperatively engaging said first securing means provided on said wall portion of the power head for releasably securing said power head onto said housing; and

10 placing at least one locking bracket on said power head proximate said at least one first securing piece to prevent expansion of said housing proximate at least said locking bracket during the operation of said cooker.

23. The method as defined in claim 22, wherein said locking bracket includes a first portion configured to be attached to the bottom of the said power head; 15 and a second portion extending at an angle from said first part and spaced from the wall portion of the power head;

wherein a gap is formed between the second portion and the heating unit for receiving the portion of the housing defining the opening.

20 24. The method as defined in claim 22, wherein said at least one first securing piece includes a plurality of lands protruding from the wall portion of the power head, and said second securing piece includes corresponding tabs projecting from the housing proximate the opening of the housing.